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(6-Months-April through September 1965)

U. S. DEPARTMENT OF AGRICULTURE  
Statistical Reporting Service

U. S. DEPARTMENT OF COMMERCE  
Weather Bureau

TEMPERATURE Spring and summer, 1965 were the coldest for several years, and September's average temperature appears to have been well below all previous records for the month. Seasonal temperatures averaged below normal in all divisions except: the Western, Southwestern, Central, South-Central (in April); and the Western and North-Central (in August). Temperatures were above normal in all sections for only one week, August 9-15. August 1, Libby and Eureka reported the first temperatures of 100° for the season and August 10-12 many east of the Divide stations had 100° maximums. This was only the second year since 1895 that 100° temperatures occurred so late in the season; the other summer was 1915. An invasion of cold air brought freezing temperatures to many stations in the western two-thirds of the State June 7-8, and to some high elevation stations as late as June 29. Freezing was general in the two eastern divisions May 27 and 28. A number of high-elevation stations observed freezing temperatures each month of the growing season. Temperatures in the teens and 20's abruptly terminated the growing season September 17-18 all areas. Many stations reported the coldest for so early in the fall. Extreme temperatures for the season were 1° at Simpson April 4 and 108° at Mizpah August 12.

PRECIPITATION Average precipitation for April-September (inclusive) was the greatest since the spring-summer season of 1927. All divisions averaged above normal except: a few stations in the southeast portion (entire period); the Western, North-Central, and Central divisions in May; and the Southeastern division in August. During the period August 25 through September 21, one of the rainiest late summer periods in Montana weather history, precipitation fell on 8 to 12 days in the east portion and up to 21 days in the west. During the last half of September snow in the western sections accumulated to sufficient depths to hamper surface transportation in a few areas. By the end of the month, it was unusually deep in the higher mountains.

SEVERE STORMS The most damaging hailstorm of the season struck central Chouteau County early evening July 10. The storm was centered in the Carter-Fort Benton area; damage was estimated at \$2,000,000 for crops and \$750,000 for property. Hailstones varied in size from buckwheat to baseballs; some measured 7 inches in circumference. A series of storms June 30 caused about \$500,000 damage to crops in Hill, Blaine, Valley, Phillips, and Roosevelt counties. About \$400,000 of this occurred near Dodson, where a funnel cloud was sighted. Other \$500,000 storms July 10 in Pondera, Hill and Blaine counties; and July 11 in the Kinsey area (Custer County); and in the Billings-Huntley-Shepherd area eastward into northern Big Horn County; five funnel clouds were observed around the Billings area during the evening of the storm. A number of other storms during July and August individually damaged crops to the extent of from \$10,000 to \$100,000. Total estimated hail damage for the season; crops \$5,500,000; property, a little over \$1,000,000. A heavy rainstorm June 15 in southeast Dawson, northwest Wibaux, and southern Richland counties caused flash flooding which drowned two people, caused heavy soil erosion, washed out roads and bridges, and destroyed much real estate and other property. A second heavy storm in the Laurel area August 22 also caused flood damage. Hail accompanying this storm did some crop damage. During the six months, 7 tornadoes and 13 funnel clouds were observed. One of these (June 10) destroyed a trailer home near Stanford and injured the occupant.

EARLY GROWTH SLOW The 1965 growing season got off to a slow start with cold, wet weather delaying field tillage work about ten days. Early forage growth was slow, and by May 1 over half the State's range livestock were still receiving supplemental feed, in many instances from stocks which had been nearly exhausted by the prolonged and hard winter. Cold weather, marked by freezing

temperatures which reduced fruit prospects and damaged sugar beet plantings over wide areas, continued through May. Extensive reseeding of winter wheat acreage was necessary in eastern and central counties as a result of winterkill. Spring planting, one to two weeks later than usual, was nearly complete by the end of May, but germination was retarded by low temperatures. Unseasonably cool weather through most of June postponed maturity of alfalfa and grasses but moderate to heavy rainfall through the first half of July insured abundant soil moisture. Development and maturity of grain crops was hastened by warm weather during the last half of July. Wheat in the eastern third of the State and portions of north central areas was badly infested with leaf and stem rusts which reduced prospective yields severely. Haying was interrupted by frequent showers but made normal progress through July.

HARVEST DELAYED Intermittent rains maintained abundant soil moisture but interfered with harvesting operations for six consecutive weeks beginning in mid-August. Quality of unharvested crops deteriorated, and in numerous instances shattering and lodging of grain occurred. Some grain already cut and swathed, sprouted in the head. Up to October 1, there was concern that much of the grain crop would not be harvested. However the weather cleared after September 24 and harvesting of grains and hay was resumed and carried to completion by mid-October. Practically all intended acreages were harvested. Losses from wet weather and other factors were much below those expected earlier.

LARGE CROPS EXPECTED Despite the many adverse factors affecting this year's crops, overall production is expected to reach impressive proportions. In most instances the greatest damage from the wet weather at harvest time was reduction of quality. Prospective yields prior to the rust invasion and wet weather were very high and even after deterioration and shattering, the yields finally harvested were much above average for all crops except corn, dry beans and sugar beets. Based on October 1 conditions, production forecasts were above a year earlier for winter wheat, up 26 percent; flaxseed, 25; potatoes, 18; oats, 14; all hay, 6; spring wheat other than durum, 5; and barley 3 percent above last year. Production is expected to be less than last year for durum wheat, sugar beets and dry beans. Part of the reduction in durum and beets is attributed to cutbacks in acreages planted.

**PRECIPITATION: 6-Month Total, April-September 1965, and Normal**

STATION	6-Month Precipitation		STATION	6-Month Precipitation	
	April-September			April-September	
	1965	Normal		1965	Normal

**WESTERN DIVISION**

Alberton	14.05		Missoula WBAS	9.80	7.34
Big Fork 10S	15.78		Ovando 1SW	10.73	7.80
Creston	13.27		Ovando 7WNW	11.25	
Darby	11.04	7.45	Philipsburg	12.87	9.74
Drummond	9.83	7.62*	Pleasant Valley	10.97	7.99
E. Anaconda	14.56	8.43	Polson Airport	10.79	8.53
Elliston	12.93		Polson Kerr Dam	10.84	
Eureka	10.16		St. Ignatius	11.46	9.31
Fortine 1N	10.40	9.19	St. Regis	14.26	
Hamilton	10.91	6.67	Seeley Lake	12.50	
Haugan	13.85	9.05	Stevensville	9.61	6.57
Heron 2NW	14.47	10.24	Summit	17.35	
Hungry Horse	16.21		Superior	13.45	7.57
Kalispell WBAS	10.40	8.09	Swan Lake	17.95	
Kalispell	12.51		Thompson Falls	13.09	8.18
Kila	12.58		Trout Creek	13.16	
Libby 1NE	9.15	6.70	Troy	12.67	
Lindbergh Lake	14.97		West. Montana Br. Sta.	11.53	
Lonepine 1WNW	8.49	5.57	West Glacier	17.58	11.74
Missoula 2WNW	12.02	7.49			

**SOUTHWESTERN DIVISION**

Alder 17S	10.22		Jackson	9.15	
Belgrade FAA AP	14.47	9.23*	Lakeview	15.60	
Boulder St. Sch.	11.05		Lima	9.67	7.78
Bozeman Ag. Col.	15.49	10.90	Norris 3 ENE	11.93	
Bozeman 12NE	22.92		Norris, Madison PH	12.81	11.87
Butte FAA AP	11.29	8.33	Pony	12.38	
Dillon FAA AP	9.32	6.95*	Twin Bridges	9.07	
Dillon WMC	11.56	8.12	Virginia City	14.27	9.53
Divide 2NW	10.10		W. Yellowstone	15.05	9.63
Ennis	8.56	8.29	Whitehall	9.56	7.52*
Gallatin Gateway 26S	11.75		Wisdom	8.72	
Hebgen Dam	14.86	11.31			

\* Estimated Normal



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NORTH CENTRAL DIVISION

Babb 6NE	15.98	13.53	Goldbutte 7N	15.31	
Big Sandy	14.81	9.24	Harlem	10.10	8.95
Brady (Aznoe)	11.44		Havre WBAS	15.84	8.61
Browning	12.57	10.17	Joplin 1N	13.14	
Chester	10.93		Loma 1WNW	14.14	
Chester 26 NNW	16.57		Lonesome Lake	11.86	
Chinook	14.54	9.25	Loring 10N	11.25	
Choteau	10.82	9.34	Malta	10.89	8.84
Conrad	13.26	9.49	Malta 35S	13.87	
Cut Bank FAA AP	11.33	9.12	Santa Rita 14N	15.21	
Del Bonita	14.76		Shelby AP	13.66	
Dunkirk 14 NNE	10.48	8.88	Shonkin 7S	28.34	
Fairfield	12.68	9.32	Simpson 6NW	11.96	8.16
Forks 4 NNE	12.84		Sweetgrass	15.94	
Ft. Assiniboine	14.04	8.56	Telegraph Creek	10.52	8.51
Ft. Benton	13.89	10.01	Tiber Dam	10.63	
Geraldine	14.37		Turner	16.77	
Gilford	13.63		Valier	12.89	10.26

CENTRAL DIVISION

Austin 1W	13.04		Lincoln	10.48	
Barber	11.95		Martinsdale 3NNW	13.17	10.14
Canyon Ferry PH	12.93		Melstone	14.94	8.60
Cascade 5S	15.94	10.45	Moccasin Exp. Stat.	15.22	10.64
Cascade 20 SSE	17.66		Raynesford 1 W	22.83	
Denton	13.46		Rogers Pass 6 NNE	18.98	
Flatwillow 4 ENE	12.69	9.53	Roundup	13.41	8.22
Grass Range	14.27		Roy 8 NE	12.39	
Grass Range 12 NE	12.32		Roy 24 NE	9.93	
Great Falls WBAS	13.86	9.72	Stanford	13.84	11.19
Harlowton	11.84		Sun River 5 SW	14.49	
Helena WBAS	12.92	7.49	Toston 3 SW	13.83	
Holter Dam	14.89	9.07	Townsend	12.16	
Judith Gap 13E	15.23		Utica 11 WSW	15.31	
Lennep 5 SW	15.06		White Sul. Sprgs.	13.36	11.19
Lewistown FAA AP	18.05	12.02	Winifred	14.40	9.15

SOUTH CENTRAL DIVISION

Big Timber	12.79	10.06	Joliet	13.59	
Billings	12.75	9.43	Kirby 1 S	13.31	
Billings WBAS	12.32	8.73	Livingston	11.26	9.09
Bridger	12.18		Livingston FAA AP	12.34	10.23*
Columbus	13.67	9.51	Melville 4 W	14.75	
Crow Agency	11.51	9.32	Mystic Lake	15.63	15.25
Custer	10.95		Red Lodge	17.66	13.39
Gardiner	6.52		Wilsall	12.63	
Hardin	10.13		Wilsall 8 ENE	18.19	
Huntley Exp. Sta.	11.91	7.96	Wyola	9.94	9.04*
Hysham	13.68		Yellowstone Park NE	16.80	
			Yellowtail Dam	13.98	

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NORTHEASTERN DIVISION

Bredette	14.01		Mosby 2 ENE	17.34	
Brockway	15.40		Mosby 18 N	13.45	
Circle	14.53	9.28 *	Nohly 3 WNW	18.52	
Cohagen 9 WSW	11.18		Opheim 10 N	13.23	
Culbertson	17.31	10.26	Opheim 12 SSE	14.23	
Ft. Peck PP	19.97		Poplar	17.22	10.21
Frazer	17.69	9.74	Raymond Border Sta.	17.80	
Glasgow WBAS	13.11	9.26	Redstone	12.66	
Glendive	16.03	9.91	Richey	17.96	
Haxby 18 SW	17.46	9.79	Savage	15.89	10.82
Hinsdale	9.45		Scobey	14.26	
Jordan	13.32	7.81	Sidney	14.74	10.72*
Lambert 3 ESE	18.33		Vida	19.56	10.81
Medicine Lake 3 SE	14.38	10.35	Westby	19.38	
			Wolf Point 4 ESE	16.17	

SOUTHEASTERN DIVISION

Albion 1 N	12.25		Mildred	13.52	9.56
Biddle 8 SW	10.75		Miles City	11.84	
Binney 2 SE	9.80	"	Miles City FAA AP	12.56	9.04
Boyes	12.95		Moorhead 9 NE	9.36	
Brandenberg	10.01		Otter 9 SSW	13.33	
Broadus	8.87	10.10*	Plevna	10.81	9.70
Colstrip	11.25	10.48	Ridgway 1 S	11.79	
Eklatoka	12.39	10.32	Terry	10.54	
Forsyth 2 E	10.38		Terry 25 NNW	15.35	
Lame Deer	10.12		Wibaux 2 E	16.02	

\* Estimated Normal

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